



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,152	04/16/2004	Naoki Tomiyama	ED-US030089	7796
22919	7590	12/13/2005	EXAMINER	
SHINJYU GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			LORENCE, RICHARD M	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/825,152	Applicant(s) TOMIYAMA, NAOKI	
	Examiner Richard M. Lorence	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 7,8,11 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,9,10 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/16/04 & 11/17/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first Office action on the merits of Application No. 10/825,152 filed on April 16, 2004. Claims 1-15 are currently pending.

Election/Restrictions

Applicant's election without traverse of the species of Figures 11-14 in the reply filed on November 18, 2005 is acknowledged.

Claims 7, 8, 11 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Drawings

The drawings are objected to because in Figure 2 the lead line associated with the reference character "75d" is misdirected. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the

several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: In line 11 on page 15 "20" should be deleted. In line 13 on page 17 "rives" should read - - rivets - -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9, 10 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (JP 10-246307 A). Kato et al. discloses a lockup device B for a hydrodynamic torque transmitting device 1 that includes a front cover 3 having a friction

surface, an impeller 6 fixed to the front cover 3 to form a fluid chamber C filled with working fluid, and a turbine 13 arranged in the fluid chamber and opposed to the impeller 6. The lockup device comprises a piston 27 arranged between the front cover 3 and the turbine 13 and axially movable in response to pressure from the working fluid. The piston includes a pushing portion 28 opposed to the friction surface. A first clutch member 50 includes a portion 52 located radially outside the pushing portion 28 which is attached axially movably and non-rotatably to the piston 27 and a first frictional coupling portion 51 arranged axially between the friction surface and the pushing portion 34. A piston coupling mechanism 55 is arranged at the front cover 3 to divide a space B located axially between the front cover 3 and the piston 27 into a first working fluid chamber on a front cover side and a second working fluid chamber on a piston side. The piston coupling mechanism includes an axially movable first pressure-contact portion 57 arranged axially between the first frictional coupling portion 51 and the pushing portion 28 that axially movably couples the pushing portion 34 and the first frictional coupling portion 53, and a pressure control mechanism 54 that equalizes the pressures in the first and second working fluid chambers. The notches 56 in piston coupling mechanism 55 are not sealed with respect to the external tooth on body 54 and therefore an oil passage is formed between the first and second working fluid chambers such that pressure equalization may occur as in claims 9 and 10.

Kato et al. additionally discloses the piston including engagement portions 34A projecting toward the front cover 3 from a portion radially outside the pushing portion 28,

and a damper mechanism 43 arranged on the turbine side of the piston 28 for elastically coupling the turbine 13 and the piston 28 together, wherein the damper mechanism has a drive plate 34 fixed to the piston, a driven plate 45 arranged for rotation with the turbine and elastic members 41, 42 supported by a surface 29 of the piston on the turbine side and compressible in a rotational direction between the drive plate and the driven plate as recited in claims 12-14.

Claims 12-14 are further rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-344099 A which discloses a lockup device for a hydrodynamic torque transmitting device including a front cover 1 including a friction surface, an impeller fixed to the front cover and forming a fluid chamber filled with working fluid, and a turbine 3 arranged in the fluid chamber and opposed to the impeller, wherein the lockup device comprises a piston 2 arranged between the front cover and the turbine and axially movable in response to pressure from the working fluid, the piston including a pushing portion opposed to the friction surface and engagement portions 25 projecting toward the front cover from a portion radially outside the pushing portion, a damper mechanism arranged on the turbine side of the piston for elastically coupling the turbine and the piston together, a first clutch member 21 axially movably and non-rotatably engaged with the engagement portion, and including a first frictional coupling portion arranged axially between the friction surface and the pushing portion, and a piston coupling mechanism 11 provided at the front cover, the piston coupling mechanism including an axially movable first pressure-contact portion 119 arranged axially between the first

frictional coupling portion and the pushing portion, and axially movably coupling the pushing portion and the first frictional coupling portion to the front cover.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (JP 10-246307 A) in view of Bauer et al. (US 2001/0011621 A1).

Kato et al. discloses a lockup device B for a hydrodynamic torque transmitting device 1 that includes a front cover 3 having a friction surface, an impeller 6 fixed to the front cover 3 to form a fluid chamber C filled with working fluid, and a turbine 13 arranged in the fluid chamber and opposed to the impeller 6. The lockup device comprises a piston 27 arranged between the front cover 3 and the turbine 13 and axially movable in response to pressure from the working fluid. The piston includes a pushing portion 28 opposed to the friction surface. A first clutch member 50 includes a first frictional coupling portion 51 attached axially movably and non-rotatably to the piston and arranged axially between the friction surface and the pushing portion 34. An annular first coupling member 55 includes a first unit fixed to the front cover and a first pressure-contact portion provided at a radial end of the first unit and located axially

between the first frictional coupling portion and the pushing portion. Kato et al. does not disclose that the annular first coupling member is axially flexible. Bauer et al. shows a lock-up device for a hydrodynamic torque transmitting device in Figure 7 wherein an annular first coupling member 142c includes a first unit fixed to the front cover by caulking at 114c and a first pressure-contact portion 140c provided at a radial end of the first unit and located axially between a first frictional coupling portion 64c and a pushing portion of piston 62c. It would have been obvious to one having ordinary skill in the art at the time the invention was made to connect the annular first coupling member 55 of Kato et al. to the cover in the manner suggested by Bauer et al. in order to simplify the construction by eliminating the need for the additional member 54. Regarding claim 6 the arrangement of the annular first coupling member 55 of Kato et al. as modified by Bauer et al. is limited in the amount of bending which can occur by virtue of being situated axially between the elements 51 and 28 which accordingly define a restricting mechanism.

Allowable Subject Matter

Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on April 16, 2004 and November 17, 2005 have been considered by the examiner.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsuoka '457, Macdonald '292, Müller et al. '476, Arhab '380 and Dacho et al. '793 show hydrodynamic torque transmitting devices having a lockup device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Lorence whose telephone number is (571) 272-7094. The examiner can normally be reached on Mondays through Fridays from 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Richard M. Lorence
Primary Examiner
Art Unit 3681

Lorence/rml3